WHAT WE CLAIM IS:

1.   A holographic viewing device comprising a frame and a computer-generated hologram fitted in said frame, said computer-generated hologram constructed as a

5   transmission Fourier transform hologram, wherein said computer-generated hologram comprises minuscule cells having pitches δ_x and δ_y with a reconstruction image area defined by a range of spreading of $\pm$ first-order diffracted light of given wavelength from a diffraction

10 grating having grating pitches $2\delta_x$ and $2\delta_y$ that are twice as large as said pitches of cells, and an input image pattern reconstructed at said wavelength is recorded in said computer-generated hologram in such a way that a light portion of said input image pattern overlaps a

15 center of said reconstruction image area.

2.   The holographic viewing device according to claim 1, wherein said computer-generated hologram comprises a phase hologram having a multivalued phase distribution.

20   3.   A computer-generated hologram constructed as a transmission Fourier transform hologram for a holographic viewing device, wherein said computer-generated hologram comprises minuscule cells having pitches δ_x and δ_y with a reconstruction image area defined by a range of spreading

25 of $\pm$ first-order diffracted light of given wavelength from a diffraction grating having grating pitches $2\delta_x$ and $2\delta_y$ that are twice as large as said pitches of cells, and an

input image pattern reconstructed at said wavelength is recorded in said computer-generated hologram in such a way that a light portion of said input image pattern overlaps a center of said reconstruction image area.

5   4.   The computer-generated hologram according to claim 3, which comprises a phase hologram having a multivalued phase distribution.